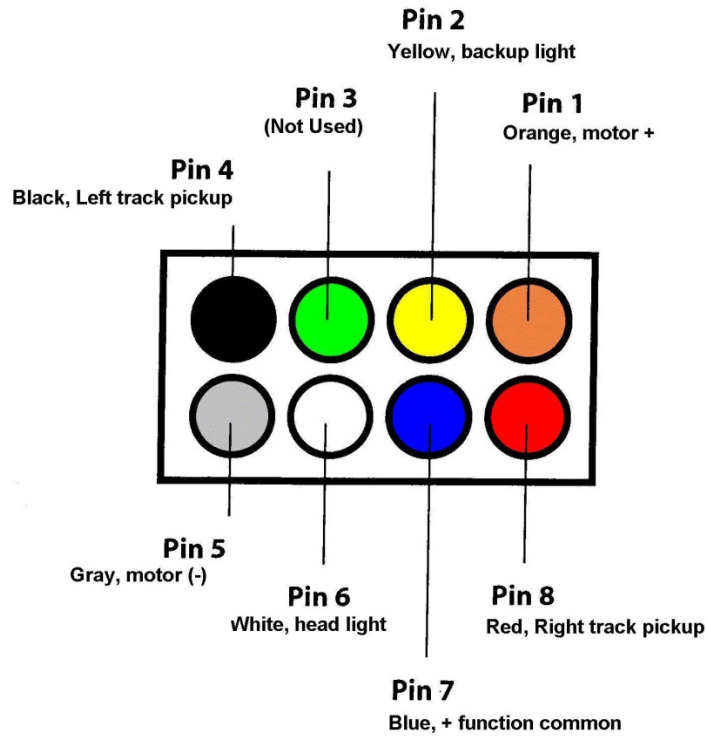




# NMRA DCC Color Code & Wiring Guide

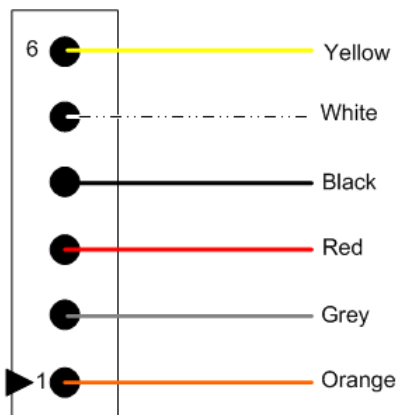


## NMRA 8-pin Connector Pin-out Viewed from wire side

### NMRA 6 Pin DCC Socket

NEM651

Viewed looking down onto the top of the socket

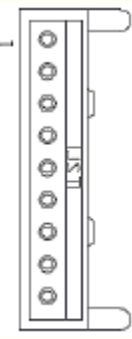


#### Functions:-

- 1 Orange - Motor Right
- 2 Grey - Motor Left
- 3 Red - Rail/wheel connection (Right rail)
- 4 Black - Rail/wheel connection (Left rail)
- 5 White - Function (Lights etc Often Headlights)
- 6 Yellow - Function (lights etc Often Rear red)

# NMRA JST-9 Connector

Color	Use	Pin Number
Violet or Brown	Output 4	1
Black	Track – Left Rail	2
Gray	Motor (-)	3
Yellow	Output 2 (Rear Headlight)	4
White	Output 1 (Front Headlight)	5
Blue	+V	6
Orange	Motor (+)	7
Red	Track – Right Rail	8
Green	Output 3	9



# The 21MTC Conundrum

NMRA 21MTC				NEM 660 21MTC			
Hall 1	1	22	Track right (red)	Input 1	1	22	Track right (red)
Hall 2	2	21	Track left (black)	Input 2	2	21	Track left (black)
Hall 3	3	20	GND (ground)	Aux 6	3	20	GND (ground)
Aux 4	4	19	Motor 1 (orange)	Aux 4	4	19	Motor 1 (orange)
TB Clock	5	18	Motor 2 (gray)	TB Clock	5	18	Motor 2 (gray)
TB Data	6	17	Motor 3	TB Data	6	17	Aux 5
F0 r yellow	7	16	(+) Plus (blue)	F0 r yellow	7	16	(+) Plus (blue)
F0 f white	8	15	Aux 1	F0 f white	8	15	Aux 1
Speaker 100?	9	14	Aux 2	Speaker	9	14	Aux 2
Speaker 100?	10	13	Aux 3	Speaker	10	13	Aux 3
Index	11	12	Vcc	Index	11	12	Vcc

AUX 3 and AUX 4 are amplified or powered outputs, i.e., **TCS** and **Soundtraxx**

AUX 3 and AUX 4 are signal or Logic Level outputs requiring additional transistors to operate the outputs, i.e., **Loksound** and **Zimo**

